UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,714	12/05/2003	Ju-hyung Kim	1568.1081	6907

49455 7590 04/13/2006

STEIN, MCEWEN & BUI, LLP
1400 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20005

EXAMINER	
WALKER, KEITH D	

ART UNIT	PAPER NUMBER
1745	

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,714	KIM ET AL.	
	Examiner	Art Unit	
	Keith Walker	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-28,33 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-28,33 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Remarks

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/6/06 has been entered.

Claims 12-28, 33 & 34 are pending examination.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 27 & 28 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 18 & 28 of copending Application No. 10/737,837. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both claim a can housing

an electric generation element with a safety device, a plate attached to a first surface of the can, and a lead unit electrically connecting the first terminal and the second terminal through the safety device.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 12, 17, 18, 27, 28, 33 & 34 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,492,058 (Watanabe).

Watanabe teaches using a positive temperature coefficient (PTC) safety device between the terminals (Fig. 10, 15, Col. 8, 43-49). The PTC protects the battery by restricting the flow of current when the temperature increases and a rapid increase in the voltage will cause the battery to heat up. A protection circuit is used in conjunction with the PTC to aid in preventing the over-charging and over-discharging (Fig. 1 & 2, Col. 1, ll. 13-20). The protection circuit is connected to the safety device and the second terminal (Col. 8, ln. 65 – Col. 9, ln. 5). The intermediate product, as taught by Watanabe is a lithium battery with a safety device located on the exterior of the battery

with one end of the lead disposed at a terminal and the other end connected to the safety device (Figs. 1, 2, 10).

Regarding claims 27 & 28, the claims are seen as product-by-process and even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (MPEP 2113). The method of forming the weld is not germane to the issue of patentability of the device itself and therefore this limitation has not been given patentable weight. Watanabe teaches spot-welding the materials together, producing an end product that has been welded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 13, 14 & 19-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,492,058 (Watanabe) in view of US Patent 5,976,729 (Morishita) and as evidenced by US Patent 5,188,909 (Pedicini).

The teachings of Watanabe as discussed above are incorporated herein.

Watanabe is silent to the materials used for the leads and the housing.

Like Watanabe, Morishita teaches a lithium ion cell with an external protective circuit for controlling the cell voltage to prevent overcharge and over-discharge (1:10-15). The lithium cell has a first surface of the outer can and a second surface being the lid (Col. 4, ll. 1-16). It is obvious to one skilled in the art to attach one electrode to a first surface of the case and the opposite electrode to a second surface to make a battery with external contacts, as evidenced by Pedicini (Col. 5, ll. 52-66). The outer can and lead are made of the same material, aluminum, and are welded together using ultrasonic welding (Col. 2, ll. 37-40). Further, Morishita teaches the use of different materials in the making of the leads with alternate welding techniques. As stated above, the outer can and lead are made of the same material and attached using ultrasonic welding so a smaller heat value is required, thereby preventing the occurrence of pinholes and cracks (Col. 2, ll. 37-53). Two-layer cladding for the lead plate is also used for current utilization (Col. 5, ll. 22-27). So regarding the different first and second materials used as leads, the use of multiple materials is taught and it would have been obvious to one having ordinary skill in the art at the time the invention was made to pick lead materials based on the use in the battery and the style of welding needed. It is held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice (*In re Leshin*, 125 USPQ 416).

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the lithium cell of Watanabe with the battery

casing and lead material of Morishita to understand what materials should be used for the leads in the production of the lithium battery with a protective device.

4. Claims 15 & 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,492,058 (Watanabe) as applied to claim 12 above, and further in view of US Patent 5,188,909 (Pedicini).

The teachings of Watanabe as described above are incorporated herein.

Watanabe is silent to the use of a safety vent.

Pedicini teaches sealing the opening of the battery with a cap assembly that has a vent for the cell (Col. 5, ll. 52-66).

The motivation to use a cap with a vent is to provide a means for the expulsion of any internal gas pressure created by the battery. The pressure will not only cause a decline in the effectiveness of the battery but can cause the battery to rupture.

Therefore it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the battery of Watanabe with the cap vent to promote a safer and more efficient battery.

Response to Arguments

Applicant's arguments with respect to claims 12-28 & 33-34 have been considered but are moot in view of the new ground(s) of rejection based on amendments.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Walker whose telephone number is 571-272-3458. The examiner can normally be reached on Mon. - Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KW

PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER